ScienceUpdate

Sturdier Melons Taste Good, Too

The usual shelf life of ripe honeydews is less than 12 days. But scientists have known that calcium—just as it helps keep bones strong—also helps melon rind maintain firmness that protects the fruit against spoilage. So they checked the efficacy of dunking whole, fresh, ripe honeydews into a calcium solution before putting them into commercial storage for up to 3 weeks.

Laboratory and greenhouse experiments were aimed at finding the right amount of calcium solution to protect—and not injure—the melon rind. Then, taste testers evaluated the appearance, texture, and taste of cubes cut from the treated melons and found them excellent.

Now a cooperative research and development agreement with Albion Laboratories, Inc., of Clearfield, Utah, will look at on-the-vine treatments for honeydews and cantaloupes as a supplement—or alternative—to postharvest treatments. *Gene E. Lester, USDA-ARS Crop Quality and Fruit Insect Research Unit, Weslaco, Texas; phone (956) 447-6322, e-mail glester@weslaco.ars.usda.gov.*

Mildew-Resistant Lilac for Warmer Climates

A new *Syringa* cultivar named "Betsy Ross" is the first release from a lilac genetic improvement program at the U.S. National Arboretum. Its fragrant white flowers, lush green foliage, and compact growth habit—coupled with resistance to powdery mildew and suitability to warmer climates—should help ensure its popular success.

In 1992, Betsy Ross was distributed to cooperating nurseries throughout the United States to evaluate its superior performance. It thrives under full sun throughout USDA hardiness zones 5–7 and can be used as a background planting in a shrub border, as a specimen plant or hedge, or mass-planted. Genetic material from this new lilac is being deposited in the National Plant Germplasm System, where it will be available to researchers and others interested in developing and commercializing new cultivars. *Margaret R. Pooler, USDA-ARS U.S. National Arboretum, Washington, D.C.; phone (202) 245-3468, e-mail mpooler@ars-grin.gov.*

Dietary Trends May Be Clue to Kids' Overweight

Latest USDA data shows that—compared to children 20 years ago—today's kids are, on average, taking in more calories. That—coupled with less physical activity—explains why they are increasingly overweight.

Food intake data reflects the changing habits of nearly 10,000 children nationwide. A link to this data in PDF format (Table Set 17—Food and Nutrient Intakes by Children 1994-96, 1998) can be found under "Topics of Interest" at http://www.barc.usda.gov/bhnrc/foodsurvey.

Analysts have combined data from a special 1998 nationwide survey of 5,559 children from birth to 9 years of age with data from a 1994-1996 national survey (CSFII) of all age groups, including 4,253 children to age 9.

Most children surveyed—92 percent—ate breakfast. But snack and soft drink consumption are on the rise, while milk-drinking is decreasing. Snacks contributed around 20 percent of daily calories, on average, for the 83 percent of kids who reported eating one or more snacks on the day they were surveyed.

Milk, fruits, cookies, candies, crackers, popcorn, pretzels, and corn chips were frequently reported snacks. Soft drink consumption increased 21 percent among 2- to 5-year-olds over the last 2 decades and 37 percent among 6- to 9-year-olds. *Alanna J. Moshfegh and Sharon J. Mickle, USDA-ARS Food Surveys Research Group, Beltsville, Maryland; phone (301) 504-0170, e-mail amoshfegh@rbhnrc.usda.gov smickle@rbhnrc.usda.gov.*

A Melon-Cuke Merger

What do you get when you cross a cucumber with a melon? A new hybrid named *Cucumis* x *hytivus* that may provide a bridge for shuttling useful genes—especially those for disease resistance—between the two. Many cukes and melons are susceptible to several insects and fungal, bacterial, and viral diseases that reduce both yield and quality. Though both crops belong to the diverse *Cucumis* genus, this is the first successful cross-breeding by conventional methods within the 32-member species. Researchers used traditional techniques to double the hybrid's chromosomes. *Joseph H. Kirkbride, Jr., USDA-ARS Systematic Botany and Mycology Laboratory, Beltsville, Maryland; phone (301) 504-9447, e-mail joe@nt.ars-grin.gov.*

Using Microwaves To Extract Pectin

Among other food uses, pectin acts as a gelling agent in fruit jams and jellies and as a texturizer in premixed yogurt. A natural ingredient, it's mostly obtained from citrus pulp, peel, and albedo—the white material between the outer peel and fruit—and from apples and sugar beets. To extract pectin from fruit, industry uses a conventional heating process that takes an hour or more per batch. Overheating sometimes breaks down the pectin, reducing its quality.

Now scientists have found a way to use microwave technology to extract this valuable food ingredient, which is largely imported and sells for $6 to $8 per pound. A faster, nondestructive method could reduce the cost of domestic production and provide a market for what is currently a low-value byproduct of U.S. food processing. A patent application on the technology has been filed. *Marshall L. Fishman, USDA-ARS Plant Science and Technology Research Unit, Wyndmoor, Pennsylvania; phone (215) 233-6450, e-mail mfishman@arserrc.gov.*